

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: METALUX

Report Number: P390166

Luminaire Tested: **22CZ2-24VHE-HRP-UNV-L930-CD1-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P390166  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24VHE-HRP-UNV-L930-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

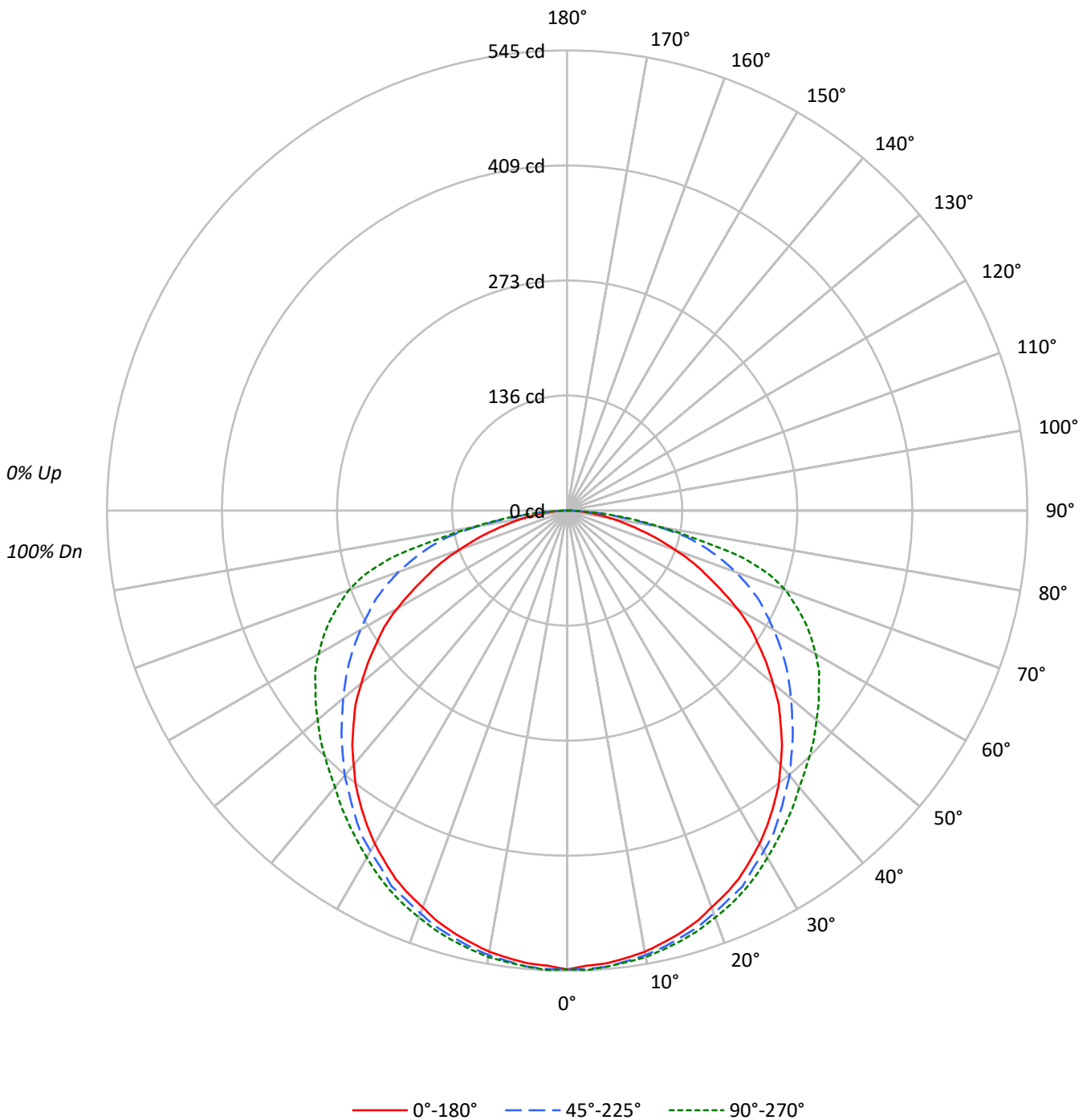
Lumens per Lamp: N/A  
Luminaire Lumens: 1729.8 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1462	1462	1462
5°	1454	1464	1464
10°	1450	1461	1467
15°	1443	1457	1468
20°	1432	1454	1468
25°	1428	1458	1474
30°	1416	1447	1475
35°	1400	1442	1484
40°	1381	1439	1502
45°	1361	1438	1550
50°	1332	1449	1614
55°	1295	1481	1707
60°	1253	1520	1829
65°	1167	1596	1977
70°	1072	1672	2163
75°	939	1759	2236
80°	809	1677	1756
85°	707	1216	1337



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.4	3.0
10°-20°	147.6	8.5
20°-30°	225.1	13.0
30°-40°	274.9	15.9
40°-50°	293.9	17.0
50°-60°	283.7	16.4
60°-70°	244.2	14.1
70°-80°	165.2	9.6
80°-90°	43.6	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	424.1	24.5
0°-40°	699.0	40.4
0°-60°	1276.7	73.8
0°-90°	1729.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1729.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	538	540	542	542	542	51
15°	518	519	523	526	527	146
25°	481	484	491	494	496	221
35°	426	430	439	448	452	267
45°	358	364	378	397	407	276
55°	276	285	316	347	364	247
65°	183	201	251	290	310	182
75°	90	120	169	204	215	97
85°	23	32	39	41	43	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	543.4	543.4	543.4	543.4	543.4
2.5°	539.5	540.8	543.4	543.4	544.6
5°	538.3	539.5	542.1	542.1	542.1
7.5°	534.5	535.7	538.3	539.5	539.5
10°	530.6	531.9	534.5	535.7	537.0
12.5°	524.3	525.5	529.4	531.9	531.9
15°	517.9	519.2	523.0	525.5	526.8
17.5°	510.3	512.8	516.6	519.2	520.5
20°	500.1	502.6	507.7	511.5	512.8
22.5°	491.2	493.7	498.8	502.6	505.2
25°	481.0	483.6	491.2	493.7	496.3
27.5°	468.3	470.8	477.2	482.3	486.1
30°	455.6	458.1	465.7	472.1	474.6
32.5°	441.6	445.4	454.3	459.4	463.2
35°	426.3	430.1	439.0	447.9	451.7
37.5°	411.0	414.8	423.7	435.2	440.3
40°	393.2	398.3	409.7	425.0	427.6
42.5°	376.7	383.0	393.2	411.0	417.4
45°	357.6	363.9	377.9	397.0	407.2
47.5°	339.8	346.1	361.4	384.3	397.0
50°	318.1	327.0	346.1	372.8	385.6
52.5°	297.8	305.4	330.9	360.1	375.4
55°	276.1	285.0	315.6	347.4	363.9
57.5°	257.0	264.7	299.0	334.7	353.8
60°	232.9	243.0	282.5	320.7	339.8
62.5°	207.4	222.7	266.0	305.4	325.8
65°	183.2	201.1	250.7	290.1	310.5
67.5°	161.6	180.7	231.6	273.6	292.7
70°	136.2	160.3	212.5	253.2	274.9
72.5°	113.3	140.0	190.9	231.6	250.7
75°	90.3	119.6	169.2	203.6	215.1
77.5°	70.0	98.0	145.1	155.2	156.5
80°	52.2	77.6	108.2	109.4	113.3
82.5°	35.6	54.7	70.0	76.4	77.6
85°	22.9	31.8	39.4	40.7	43.3
87.5°	10.2	11.5	14.0	12.7	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)